



In Re:
Serial No.:
Art Unit:

Helmut W. Kucera
09/627,312
1773

File Ref:
Filing Date:
Examiner:

IR-2800(NBA)
July 27, 2000
Monique R. Jackson

1773
RECEIVED
JAN 26 2004
TC 1700

Title: "Two-Part Aqueous Metal Protection Treatment"

Assistant Commissioner for Patents
Mail Stop IDS
PO Box 1450
Alexandria, VA 22313-1450

January 9, 2004

Re: **Supplemental literature bibliographic information**

Dear Sirs

In follow up to Applicant's prior response, see the attached bibliographic information for the article on zirconium materials submitted Dec. 17, 2003 with applicants' response to the Office. This article was published at least as early as 1987.

Miles B. Dearth
Attorney for Applicant(s)
Reg. 35, 115

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2/5/4 (Item 4 from file: 31) DIALOG(R)File 31:World Surface Coatings Abs (c) 2004
Paint Research Assn. All rts. reserv.

00413341 **WSCA Abstract Number:** 88-00897 **WSCA ID Number:** 260897

Use of zirconium chemicals in water-based coatings.

MOLES P J

Proc. Paint RA 7th Internat. Conf, 'Water-borne Coatings' , London 1987, 115-32.
1987

Journal Announcement: 8802 **WSCA Update Code:** 8712

Document Type: Conference **Language:** English

Section (Code,Heading): 07 Driers and Minor Additives

Section Code Cross-Reference: 35;

Abstract: Water-soluble zirconium compounds may be in one of three distinct forms, defined by the surface charge. The primary reaction of such compounds is with carboxyl groups to form covalent bonds; reaction with hydroxyl groups may also occur to form hydrogen bonds. The first reaction may be used, e.g., in acrylic-based water-borne coatings to increase resistance to heat, water, alkali and scrubbing, as well as to improve adhesion. Hydrogen bonding interactions may be used to provide thixotropic or pseudoplastic effects.

Descriptors: Water-borne Coatings; Zirconium Compounds; Adhesion Promoters; Cross-linking Agents; Thixotropic Agents

Chemical Names: ACRYLIC; CARBOXYL; HYDROXYL; ZIRCONIUM

Identifiers: Water-borne Coatings-- zirconium compounds, uses; Zirconium Compounds-- water-borne, uses; Adhesion Promoters-- zirconium compounds; Cross-linking Agents-- zirconium compounds, for carboxylated; Thixotropic Agents-- zirconium compounds

Additional Terms (Identifiers): heat resistance; water resistance; alkali resistance; scrub resistance; emulsion paint